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U. of Virginia, AFRL Technology Transfer award winner

by AFRL Public Affairs

WRIGHT-PATTERSON AFB, Ohio —The Air Force Research Laboratory (AFRL) has announced the Evolution Vectron Aircraft design team as the winner of its Technology Transfer Award for the 2000-2001 NASA/FAA National General Aviation Design Competition for university students.

Dennis Carter, AFRL Air Vehicles Directorate Senior Aerospace Engineer presented the award to the winning team, the University of Virginia, Charlottesville, Va., during the Experimental Aircraft Association's Air Venture 2001 in Oshkosh, Wis. on July 28.

"This award recognizes the design team demonstrating the best use of Air Force Research Laboratory technology in a student design project," Carter said. AFRL offers a $3,000 team award each year for an aircraft design or aircraft subsystem design, which also meets the criteria of the National General Aviation Design Competition and included Air Force-developed technologies.

"A panel of AFRL experts reviewed the student designs for application of Air Force technologies to select the winner of this Technology Transfer award," Carter explained.

These technologies included: wireless flight controls, aerogel and serrated engine nozzle edge noise reduction techniques, and non-hydraulic, electric actuator systems.

Dubbed as "safe, versatile, innovative, easy-to-fly and stylish," the Vector Evolution design combines "the fast, high altitude performance of a business jet with the short takeoff and landing performance of tail dragger."

The project was a team effort between 26 engineering and architecture students at the university. Some of the goals developed by its members were to implement both state of the art and developing technologies in all aspects of the design, and Air Force technologies; to maximize cruise speed to 375 knots while maintaining stall speeds less than 50 knots; to minimize cabin noise for a less distracting, more relaxing flight; reduce stall speeds to increase flight safety; and to develop an appealing interior and exterior design.

The team collaborated with resources to include colleagues from the University of Virginia's Architecture School for their expertise in aesthetic and ergonomic design, and local pilots and airport staff to get input from those intimately involved in general aviation for the development of their winning design.

The AFRL Technology Transfer Program was created to assure all Air Force science and engineering activities promote the transfer or exchange of technology with the state and local governments and the private sector. **@**

WINNING DESIGN — A University of Virginia student team won the award for Best Use of Air Force Technology in the 2001 National General Aviation Design Competition. A drawing of the design is pictured.

WINNING TEAM — Dennis Carter, pictured on left, Senior Aerospace Engineer at the Air Force Research Laboratory, is shown presenting the award to team representatives Jeff Braden, center, and Matt Daniel, right.